

# **GREEN LOGISTICS PRACTICES AMONG LOGISTICS SERVICE PROVIDER IN MALAYSIA**

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## **ABSTRACT**

The Purpose of this paper is to find the measures and steps taken by the logistics service provider in Malaysia on applying green logistics in their daily operations to reduce the negative externalities on environment. Green logistics is concerned with producing and distributing goods in a sustainable way, taking account of environmental and social factors. It also refers to a sustainable logistics which suggests compatibility with the environment. Green logistics can have major impact on reducing the environmental burden of the industry especially in terms of greenhouse gases emissions and pollutions.

### **Keywords**

Green logistics, environment, sustainable way, greenhouse gases.

## **1.0 INTRODUCTION**

The increasing influence of logistics services in moving Malaysia's economy which is derived by the globalizations and changing of world trade had dramatically created impact on environment. So, Green Logistics is the best found solutions to this situation in order to preserve the environment and provide a sustainable growth of logistics in Malaysia. Green logistics which can be best described as the supply chain management practices and strategies that reduce the environmental and energy footprint of freight distribution. It focuses on material handling, waste management, packaging and transport, integrated management of all the activities required to move products through the supply chain. For a typical product this supply chain extends from a raw material source through the production and distribution system to the point of consumption and the associated reverse logistics. The logistical activities comprise freight transport, storage, inventory management, materials handling and all the related information processing. The traditional definition of logistics encompasses the flow of materials from raw-materials supplier to end user. In green logistics, responsibility is also taken for what happens once the

product has been used, through reuse and recycling to final disposal. The aim of this paper is to find the initiative taken by the logistic service provider in tackling the environmental issues by applying the green logistics in their daily operations. Due to the increasing demand for advanced logistics and supply chain management (SCM) services over the past decade fuelled by globalization, customer orientation and different market conditions, the role of logistics service providers (LSPs) has started to change both when it comes to content and complexity. Furthermore, LSPs and its services have been identified to have potential to become more value-adding operation in supply chains (Bo and Hammervoll, 2010). This applies when LSPs begin to transform their operations and strategy to become more effective from a green perspective. Data was collected through a survey and analysed using descriptive analysis. The findings suggested that benefits obtained by the manufacturers can be categorized into three main groups namely economy, environment and social.

## **2.0 LITERATURE REVIEW**

LSPs have started to green their operations in order to help their customers to be better prepared for predictable and future green demand from both market and government legislations. However, the level of initiatives in order to develop and introduce new products and services to provide shippers with green transport and logistics options differs among LSPs. For that reason, this study aims to increase the knowledge how LSPs face the challenge to greening their operations according to their own business and its context characteristics. Therefore, an important point of departure is to understand the underlying mechanisms in form of drivers and barriers affecting these companies in their work to green their operations. Drivers to improve green considerations within logistics may include for example increased demands from authorities and customers, while barriers may consist of for example availability of technology and customers lack of interest. Another underlying mechanisms namely firm characteristic can also influence how LSPs have addressed green

initiatives, e.g. large firms are probably more exposed from customers and society and possess more resources compared to smaller firms. Hence, in general small-medium sized enterprises (SMEs) are also an exposed group when larger companies require SMEs to adopt a more green approach, which in turn can generate barriers such as lack of economic resources, lack of knowledge and experience and problems related to company structures (Biondi et al., 2000)..

## 2.0 RELATIONSHIP BETWEEN GREEN LOGISTICS AND ENVIRONMENT



Figure 1.0

Logistics has been regarded as a key determinant of business performance. However, increase in environmental concerns, which cover greatly on pollution, climate change, congestion, waste disposal, and resource depletion have triggered increased attention from the government and society. Business operations, such as sourcing, manufacturing and logistics are believed to be responsible for most of the environmental problems. Besides, the growing demand of customers and environmental societies for more environmental friendly products have led 'green' becomes a common practice to portray the environmental friendly image of products, processes, systems and technologies, and the way business is conducted. Thus, green logistics is concerned with producing and distributing goods in a sustainable way, taking account of environmental and social factors. It also refers to a sustainable logistics which suggests compatibility with the environment. Companies must adopt new environmental policies and carry out sustainable activities as competitive advantage strategies for business survival. Findings from the past survey by Insight (2008) showed that 52% of companies received benefits in terms of reducing logistics cost and have reduction in manufacturing costs when the companies practice green supply chain in their business activities. Logistics activities are one of the major and important parts along the supply chain. Besides that, the results

revealed that 47% of companies benefited from green supply chain by giving them a competitive advantage in order to compete with other companies. While survey from Aberdeen Group (2008) found that by practicing green supply chain it can help to reduce emissions, reduce waste and improve disposal. Green logistics practices by switching into alternative fuel such as biodiesel and bioethanol can help to give efficient fuel consumption because of this characteristic of alternative fuel. Beside that this fuel is very cheap compared with the other development of other renewable fuel alternative such as hydrogen (McKinnon, 2010). Green logistics practices such as true recycling or re-use of plastic products can significantly reduce the energy required across the life cycle because the high energy inputs needed to process the requisite virgin materials greatly exceeds the energy needs of the recycling or re-use process steps (Arvanitoyannis, 2007). Ubeda (2010) found that green logistics practices such as of choice to reduce number of routes, introducing backhauling in logistics activities and design the shortest routes can control the emissions of carbon dioxide emission. This can be very beneficial to the environment and to the society because reduction in this type of gases can help to reduce environmental impact such global warming and at the same time improve the society health status.

## 4.0 METHODOLOGY

All the data in the research were gathered through reviewing and analysis and comparing from previous studies on Green Logistics in Malaysia and worldwide industries. Besides that, the secondary data also added in the research that is resourced from the online journals.

Year	Title/ Author	Outcomes
2001	Green Logistics (The Paradoxes of)  Jean-Paul Rodrigue, Brian Slack, Claude Comtois.	Concerns over congestion, land take, environmental degradation are forcing legislators to be doing something <ul style="list-style-type: none"> <li>individual logistics firms are finding a match between environmental considerations and profitability</li> <li>It is becoming</li> </ul>

		<p>acceptable within the industry to adopt green measures.</p> <ul style="list-style-type: none"> <li>Environmental management systems, such as ISO 14000, may offer opportunities to green the logistics industry</li> </ul>
2001	<p>Green innovation adoption among LSP in Malaysia.</p> <p>SuhaizaZailani, AzlanAmran, HerinaJumadi.</p>	<ul style="list-style-type: none"> <li>Need for integrating logistics into sustainable development process</li> <li>Introduction of more energy efficient technology and organizing logistics in different way to reduce environment impacts.</li> <li>Introduction of Green innovation in a logistics services approach was a need to protect the environment.</li> </ul>
2008	<p>Perceived Benefits Of Green Logistics Practices</p> <p>Hilda Hussin, NittyHirawatyKamarulzaman, Amin Mahir Abdullah and Azmawani AbdRahma</p>	<ul style="list-style-type: none"> <li>Green logistics practices were proven to give benefits in terms of economy, environment and social aspect</li> <li>If these three aspects of benefits were given highly consideration in the future, it can significantly contribute to a more 'greener' logistics practices</li> </ul>

	n	among the manufacturers
2007	<p>A review of green logistics schemes used in cities around the world</p> <p>Nikolas Geroliminis, Carlos F. Daganzo.</p>	<ul style="list-style-type: none"> <li>This paper presented a number of promising city logistics schemes with "green" characteristics.</li> <li>Sustainable freight transport should be explicitly considered in city planning and operation of modern cities.</li> <li>The cost-saving strategies followed by logistic operators are often at variance with the environment, since they usually externalize the environmental costs.</li> </ul>
2011	<p>The Challenge And Adoption Of Green Initiatives For Transport And Logistics Service Providers</p> <p>Karin Isaksson, Maria Björklund, Pietro Evangelista, Maria Huge-Brodin.</p>	<ul style="list-style-type: none"> <li>describes the way LSPs have started to adopt and manage green initiatives into their operations</li> <li>Sweden was very early to adopt environmental certifications in the beginning of the 1990-ties</li> <li>Improved customer relationships, improved brand image and improved customer service are significantly stronger reasons that drive green initiatives</li> </ul>
2011	Operations	<ul style="list-style-type: none"> <li>Environmental</li> </ul>

Research for Green Logistics – An Overview of Aspects, Issues, Contributions and Challenges .	<p>advocates typically plead for a technology change, e.g. going from oil based fuel to electric cars</p> <ul style="list-style-type: none"> <li>• New models will be required to address the multitude of decisions needed to improve the environment</li> </ul>
Rommert Dekker, Jacqueline Bloemhof and Ioannis Mallidis.	

Table1: Summary of previous studies of green logistics in Malaysia

## 5.0 FINDINGS

Findings are done based from the research question and objective of this research paper. All the answers for the research questions were regarded as the findings for this research as well as the objective. For the first question, identify the differences between the daily operations of logistics and green logistics, there has been quite number of difference, first of all, the daily normal logistics activities involve for the transport company using the normal fuel or diesel, but in green logistics practices, transport company would use biodiesel and other type of fuel where there is less carbon emissions. Seconds, there was a strategy to less use the roads and explore other routes than roads such as waterways, bicycle, walking, boat and many more because of increasing vehicles on the roads does not only increasing carbon emissions and polluting the environment but also would increase the road accidents rate in a country. For the seconds question, which asked to Identify the relationship between daily operation of logistics and its impacts towards the environment.

■ Major initiatives taken for green logistics

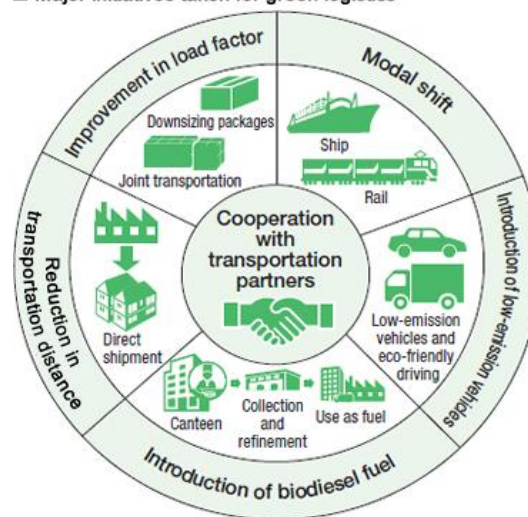


Figure 1.1

There was much contribution of logistics activities towards damaging the environment, for example the use of petrol and diesel will damage the air while increase the greenhouse gases effects, there was trucking company which use fridge to pick up perishable goods, these fridge will release the CFC gases which is very dangerous to the environment and contribute to the ozone thinning process.

## 6.0 DISCUSSION & CONCLUSION

Based from the research, it was evidently clear that green logistics contribution towards the environment was very high in value and each and every logistic service provider must starts to implement green logistics in their daily activities because it was clear that green logistics does not only preserve the environment but also cutting down the cost which a very important element in a business organization.

## 7.0 CITATIONS AND REFERENCES

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